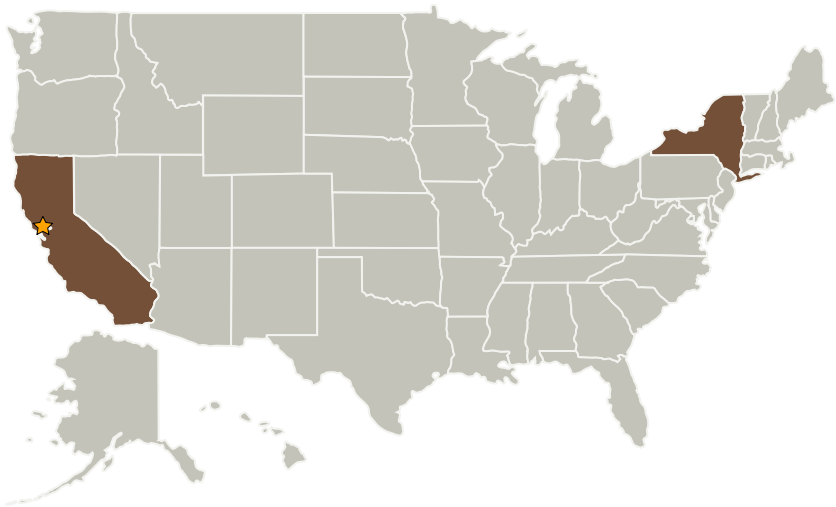
HyDE Enhancements for ISHM Deployment, Phase II

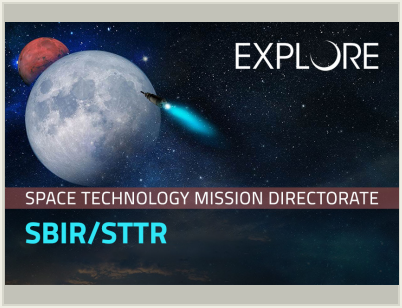
Completed Technology Project (2009 - 2011)

Project Introduction

Impact Technologies LLC, with the support of Palo Alto Research Center (PARC), proposes to continue developing key enhancements to NASA's Hybrid Diagnostic Engine (HyDE) that represent valuable and, in some cases, critical features for Integrated System Health Management (ISHM) developers in NASA and non-NASA application domains. Specifically, the proposed program will be focused on attaining three milestones. The first goal is to achieve commercial-grade readiness of a HyDE Developers Pack (HyDE DP) to TRL 6 or higher. To facilitate Phase III NASA transition, the second program goal is deploying HyDE DP to Kennedy Space Center's (KSC) Integrated Ground System in support of the Constellation Program. Finally, to facilitate Phase III commercial transition and dramatically improved the embedded capability of HyDE, preparation for Beta-site deployment and tech transition with PARC on a commercial printing platform will be performed. Building off the significant Phase I SBIR accomplishments, the Impact team believes that the proposed Phase II program is the ideal mix of innovative development work in the form of modeling, simulation, validation and verification tools for HyDE DP and tech transition activities designed to position HyDE as the diagnostic and reasoning engine for a broad application space that spans NASA, commercial and military domains.

Primary U.S. Work Locations and Key Partners





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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Impact Technologies, LLC	Supporting Organization	Industry	Rochester, New York

Primary U.S. Work Locations	
California	New York

Project Transitions

November 2009: Project Start

May 2011: Closed out

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX14 Thermal Management Systems
  - TX14.1 Cryogenic Systems
    - TX14.1.2 Launch Vehicle Propellant